

ABSTRACT

A three-dimensional camera based system for determining the position and/or alignment of objects such as motor vehicle wheels. The system includes a strobbed infrared lighting subsystem, a visible indicator that the subsystem is working properly, and targets for attachment to the objects. The system also includes at least one camera for viewing the targets, and a data processor connected to the camera for processing data relating to images of the targets to determine position and/or alignment information, and a display that displays the position and/or alignment information. The system includes directional indicators for indicating that the vehicle should be repositioned by moving it backward, forward, or steered left or right. The system also includes wheel indicators tied in with software on the data processing device. These wheel indicators indicate the state of target acquisition by the data processing device based on the image from the camera.